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FAA-01-11032-4

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B/E AEROSPACE

December 4, 2001

The Honorable Jane F. Garvey
Administrator
Federal Aviation Administration
800 Independence Avenue, S.W.
Washington, DC 20591

Subject: Docket FAA – 01 – 11032, Comments of the Air Transport Association, Flight Deck Door Standards

Dear Mrs. Garvey:

In a filing dated November 8, 2001 and placed in a public rulemaking docket on November 23, 2001, representatives of the Air Transport Association (ATA), Aerospace Industries Association, and European Association of Aerospace Industries urge that the Federal Aviation Administration (FAA) adopt regulatory standards for the design, test, manufacturing, production, and installation of secure flight deck doors on an urgent schedule and mandate that these standards apply to all retrofit doors to be installed pursuant to SFAR-92-2. B/E Aerospace, Inc. understands and sympathizes with the airlines' stated desire for a regulatory standard before making costly procurement decisions. In the abstract, the request that the FAA conclude the regulatory decision making process as quickly as possible is also a worthy objective, as airlines would then be able to begin retrofitting aircraft to meet the 18 month deadline.

However, B/E Aerospace, Inc. cannot support adoption of the standards incorporated into the Attachments to this submission because they appear inadequate to deter terrorist threats. Protection against unwanted cockpit intrusion or ballistic penetration is a critical measure in the series of security improvements being undertaken to assure that commercial aircraft never again become instruments of mass destruction. Any new Federal Aviation Regulations (FARs) governing flight deck security must adequately protect against real world threats, which we now know evil-minded, technically competent assailants are capable of producing. The underlying public policy objective of any rulemaking proceeding must be to reassure the traveling public, avoid wasteful or redundant installations of successive security enhancements, and enable airline to expeditiously commence fully effective security system upgrades. Hasty enactment of regulatory standards will be counterproductive if some of the resulting products are later proven to be demonstrably vulnerable to attack.

The Attachments to the ATA letters are the product of an Aviation Rulemaking Advisory Committee (ARAC) working group that had been assessing design standards for several years when the common understanding of the security requirement was the need to impede access to the cockpit by an enraged passenger thrusting his body weight against the door. Following the recommendations of the Rapid Response Team, these ARAC efforts were expedited, but the discussion was confined to the members of the task force. B/E Aerospace, Inc. is the world's largest supplier of cabin interior products and has demonstrated its engineering expertise in successfully completing a number of structural modifications to aircraft. Nevertheless, suppliers were excluded from the ARAC discussions. It is unclear what, if any, threat assessment was performed as a predicate to defining the impact and penetration performance criteria set forth in the attachments. Based on its substantial experience in designing and testing secure cockpit door systems, B/E Aerospace has concerns about potential shortcomings in the acceptable design standards set forth in the Attachments and fears that, if adopted, the security of the flight deck could be compromised.

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For the most part, B/E Aerospace is in agreement with the testing methodologies, which comprise the bulk of the ARAC work product. However, the issues that are of critical importance are whether the measures of acceptable performance are adequate to meet readily conceivable real world threats. The areas about which B/E Aerospace is most concerned are as follows:

1. The proposed 300-joule door, bolt, and hinge impact energy requirement would appear to be an inadequate standard. Engineering calculations and preliminary testing suggest that there are various real world scenarios in which blunt impact loads with a force in excess of 300 joules can be generated. The forces that can be generated may not be sufficient to penetrate the door. However, if the force is sufficient to cause failure of the structure supporting the door, an attacker can nonetheless gain access to the flight deck. B/E Aerospace urges the FAA to propose that the door assembly, including the structural framing, tie-ins and doorposts as well as the door, be assessed as a flight deck entry system. The entry system must be capable of withstanding a force of a minimum of 500 joules to effectively deter access to the flight deck.

2. The proposed flight deck door design standard apparently permits a manufacturer to accommodate a rapid decompression event by permitting the entire door to open or blow away, and remain open to facilitate decompression venting. While the chance of a cockpit decompression event is statistically rare based on prior data, the data are irrelevant in a post 9/11 analysis. The design standard must be sufficient to deal with a terrorist induced cockpit decompression event. Decompression venting must be achieved without the full door opening or panels blowing away in a manner that creates an opening and sufficient time for an assailant to gain access to the flight deck. B/E Aerospace strongly advocates that an acceptable design standard must require that access to the flight deck be denied even in the case of a cockpit-initiated decompression event.

3. The proposed test procedures do not adequately measure the cumulative affects of attacks on the structural integrity of the door entry system. B/E Aerospace testing has indicated that ballistics materials are prone to delamination, which adversely affects the structural integrity of the door design. The door must be tested as a system with appropriate engineering data and sequential tests on the same test article to make a determination that the system is not capable of being penetrated following multiple attacks on the door system. B/E Aerospace recommends that the 500-joule impact test should follow the ballistic test. The test should be made on a representative door and the test article should be subjected to both tests in a sequential fashion.

B/E Aerospace is raising these concerns to facilitate the ATA's request to the FAA that retrofit standards be enacted on an urgent schedule. If the agency proceeds to rulemaking using the proffered standards as the basis for proposed rules, B/E Aerospace fears that the rulemaking process could not proceed smoothly to adoption if the comments on the proposal subsequently demonstrate that the performance measures are inadequate to deter threats. Since it is inconceivable that the FAA would proceed to enact regulations merely to meet a deadline, the likely result would be postponement of the deadlines established in SFAR-92-2, another undesirable public policy outcome.

To avert these possibilities, B/E Aerospace requests that the FAA publish the standards proposed in this submission as an alternate option to the ARAC recommendations or additional regulatory requirements. The proponents of a particular standard or approach should be required to produce evidence that the design standard that is advocated will withstand foreseeable threats from assailants. Publication of a Notice of Proposed Rulemaking that requests comments on alternative proposals provides legal notice of the issues that commenters must address and, accordingly, permits the agency to proceed to adopt any proposed standard as a final rule without being required to revise and republish the proposed rule to incorporate changes dictated by the comments. Data are only now being developed that take into account the new realities. Without doubt, these challenging conditions compel a timely response. It is therefore vitally important the FAA maintain the flexibility to adopt more stringent requirements in response to the industry experience and knowledge that is being generated daily.

B/E Aerospace is convinced that the regulatory requirements that it has proposed will have no material adverse affect on the industry's ability to collectively meet the retrofit implementation deadlines imposed by SFAR-92-2. Adoption of higher standards should also have minimal impact on the production cost of the new system and on operational costs related to the door system's additional weight.[1] The biggest danger is not getting that right solution, as B/E Aerospace's preliminary research suggests may be the case. B/E Aerospace understands the desire to move forward with the process of defining standards and therefore is not urging the FAA to reject the ARAC recommendations. Rather, the course of action that would alleviate B/E Aerospace's immediate concerns is to expand the scope of any contemplated rulemaking proceeding to incorporate the recommendations outlined in this letter.

Sincerely,

Robert J. Khoury

Robert J. Khoury
President & Chief Executive Officer
B/E Aerospace, Inc.

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[1] To the extent that carriers weigh the competitive implications of fuel cost increases driven by a heavier door, adoption of a regulatory standard dictating a minimum amount of robustness should even the competitive playing field.